ASL

SUMMER NEWSLETTER 2014

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Editor: Samantha Capon
s.capon@griffith.edu.au

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President's report

This newsletter follows the recent successful congress in Canberra. I would like to reiterate my thanks to the local organizing committee and ASN Events for organizing the congress. While we now have the support of ASN to organize conferences, we still need local organizing committees to volunteer to host conferences and do things like program organization, arranging plenary speakers etc. Our conference destinations for the next two years are already planned: Darwin in 2014 (joint congress with ASFB) and New Zealand in 2015 (joint congress with NZFSS). However, I would welcome any volunteers to host the 2016 congress. As Darwin and NZ are distant and expensive destinations, I would welcome volunteers from the south-east corner – please contact me if you would like to host this congress.

This newsletter also includes the minutes of the AGM held at the conference and although most of you probably don't turn to that page first, I encourage you to read it as it covers most of the recent news about and concerns of, the Society. This newsletter also contains the new rules for applicants for the Bill Williams Travel Award, so if you are interested in applying please read these first.

More details of our forthcoming joint congress in Darwin with ASFB are also included in this newsletter. Registrations will be opening soon. As with most conferences that are not in the south-east, this will be a somewhat more expensive congress to attend, although the interesting location and integration with ASFB will provide plenty to interest members. The executive is aware that the costs will be high for students and so we will be raising the amount of funding supplied to students who apply for a Student Travel Award to attend the conference. I encourage all students to apply for these awards to help offset the cost of attendance. Please also note that if you have recently submitted your thesis, you may still be eligible for travel award funding – please contact Richard Marchant for details, applications may be considered from students up to 18 months after thesis submission.

The latest membership reports suggest that a number of members are yet to pay their membership dues. If you have not yet paid them, please take a minute to visit the website www.asl.org.au and pay your membership. Please encourage your colleagues and students to join the society in order to benefit from local events, congresses and of course this newsletter. With funding for science and the environment diminishing, voluntary organizations like ASL become more and more important to provide scientists with a means to share interests and knowledge, but we need a strong membership base to do it.

Finally, I would like to thank the members of the executive committee for their support in 2013. I look forward to working with you all in the New Year.

Wishing you and your families all the best for 2014,

Belinda Robson

from the editor...

Thanks to everyone for your contributions to the Summer newsletter. I hope the arrivals of your submissions is indicative of a relaxing festive season enjoyed by all! It has certainly been an amazing summer in the northern rivers without the deluge of rain we've been subjected to in recent years.

Here's to a fabulous Year of the Horse - off to a galloping start already!

Sam

NEWSLETTER EDITOR:

Dr Samantha Capon

Griffith University

s.capon@griffith.edu.au

DEPUTY EDITORS:

Sarah Mika

(University of New England)

Dianne Conrick

(Consultant)

In the news...

Congratulations to Terry Hillman who has been appointed as a Member of the Order of Australia (AM). Dr Hillman has been surveying the health of the Murray-Darling Basin for decades and has lived most of his life on the Murray.

A former president of ASL, Albury based Dr Hillam was the Deputy Director the CRC for Freshwater Ecology from 1993 to 2005 and positions at Latrobe University, the Australian National University and Charles Sturt University. He was the Chair of the NSW Water Ministerial Advisory Council.

Now retired, Dr Hillman is still invovled with numerous groups inlcuded the Hume-Yarrawonga Waterway Management Working Group and the Wentworth Group of Concerned Scientists.

In receiving this prestigious award, Dr Hillman recognised the support he has received from many people around him.

AUSRIVAS course now enrolling

The AUSRIVAS Online training course is offered twice a year by the eWater and the University of Canberra. The course aims to teach the skills and knowledge needed to assess river health to an acceptable standard using the Australian River Assessment System (AUSRIVAS) methods. Those who complete its requirements successfully are eligible for accreditation from the relevant state or territory agency.

There are no prerequisites for this non-award course, other than registration and payment. The theoretical knowledge required to use AUSRIVAS for river health assessment can be learnt entirely online in four interactive modules that can be completed at you own pace over 12 weeks. A 4-day practical face-to-face workshop is offered as a fifth module, teaching the practical skills required.

The workshop module is held in Canberra late November or Early December) but would you like us to hold a workshop in your state? If there is sufficient demand from a group or agency we can arrange a workshop in any State or Territory.

If you would like to enrol in the course or any individual module please contact Sue Nichols- susan.nichols@canberra.edu.au or Evan Harrison- evan.harrison@canberra.edu.au for more information or queries regarding a workshop outside the ACT.

http://ausrivas.ewater.com.au/index.php/training-and-accreditation3/introduction

ASFB & ASL CONGRESS 2014

For the first time in their history, the Australian Society for Fish Biology and Australian Society for Limnology will hold a Joint Congress in 2014; at the Darwin Convention Centre, Darwin, from 30th June – 4th July 2014.

Water is vital to the lifestyle and character of the Top End; we're surrounded by a vast array of largely pristine freshwater and marine ecosystems, including internationally-significant wetlands like Kakadu National Park, extensive estuaries, off-shore reefs and free-flowing rivers.

ASFB and ASL are Australia's pre-eminent professional organisations for scientists and managers engaged in research, education and management of fish and fisheries (ASFB) and inland waters (ASL). The Societies pride themselves on facilitating interdisciplinary exchange of the latest scientific advances among their membership and beyond, actively engaging with the public and encouraging student participation and membership.

The 2014 Joint Congress presents an unparalleled opportunity for participants to showcase their science and share advances in their disciplines. The theme for the invited plenary sessions will be "Indigenous participation in research and management of aquatic ecosystems". Speakers from North America, New Zealand and across Australia will showcase the significant roles that Indigenous people are playing in aquatic research and management worldwide, demonstrate the huge benefits of involving Indigenous people in their work, and detailing the most productive ways of working across cultures to achieve great outcomes.

The Congress will be held at the Darwin Convention Centre, on the shores of picturesque Darwin Harbour. The Centre offers world class conference and meeting facilities only minutes walk from the Darwin CBD, with its range of motels, restaurants and eclectic nightspots. The Congress will run over four days, packed full of informative plenary talks, keynote presentations, conference presentations from all areas of marine and freshwater ecology and aquatic resource management, and, of course, plenty of networking and socialising in true NT style!!!

KEY DATES

3 February 2014	REGISTRATIONS OPEN
3 February 2014	ABSTRACT SUBMISSIONS OPEN
31 March 2014	ABSTRACT SUBMISSIONS CLOSE
30 April 2014	EARLY BIRD REGISTRATIONS CLOSE
30 June to 4 July 2014	ASFB & ASL CONGRESS

http://www.asfbasl.org.au/

ASL Congress 2013 Report

52nd Congress
University of Canberra
2nd - 5th December 2013

Immediately before the conference the International Aquatic Health and Management Symposium was held, organised by Sue Nichols. This featured international guests Trefor Reynoldson (Canada), Iwan Jones (UK) and Chuck Hawkins (USA) as well as more than 50 researchers and managers from across Australia. The focus of the workshop was a prospective look at aquatic bioassessment and flowed into contributed sessions during the conference proper, and a writing workshop afterwards. The day finished with the inaugural Richard Norris Public Lecture, which will be an annual event at U Canberra from now on. Running concurrently were a series of student workshops on grant writing, careers and CV preparation which were very well attended by more than 50 students.

The conference proper began with a keynote address from Professor Colin Townsend (NZ) – a retrospective on his decades of work on the community consequences of aquatic invasions. Parallel sessions followed on a wide range of themes, and including poster and keynote sessions. On the Wednesday the annual Hillary Jolly Lecture by ASL Medal Winner Bruce Chessman and Chrsity Fellows Award lecture by Early Career Research award winner Angus Webb, were particular highlights. Thursday featured sessions addressing the science-policy interface with presentations from Jane Doolan (ex Victorian state government), Gary Jones (eWater), Laurel Tierney (NZ), Kerry Olsson (National Water Commission), Jody Swirepik (MDBA) and Kim Ritman (ABARES). These talks were the basis for animated discussion at the mixer and conference dinner which followed.

Despite some challenges – failed air conditioning meant the conference rooms sat at a balmy 30 odd degrees throughout – we hope that delegates enjoyed the meeting. The organising committee (Ross Thompson, Sue Nichols, Fiona Dyer, Evan Harrison, Sally Hatton) would particularly like to thank our sponsors; the University of Canberra Institute for Applied Ecology, Murray Darling Basin Futures CRN, eWater, Bennelongia Environmental Consultants, Victoria Department of Environment and Primary Industries, Sinclair Knight Merz, the Australian Rivers Institute at Griffith University, the Marine and Freshwater Research laboratory at Murdoch University and CSIRO Publishing. Exceptional logistic support was provided by ASN Events. We look forward to the next meeting in Darwin, 2014.

A pleasing 206 ASL members and non-members attended the Congress in Canberra. 27% of attendees were students and there were seven international visitors.

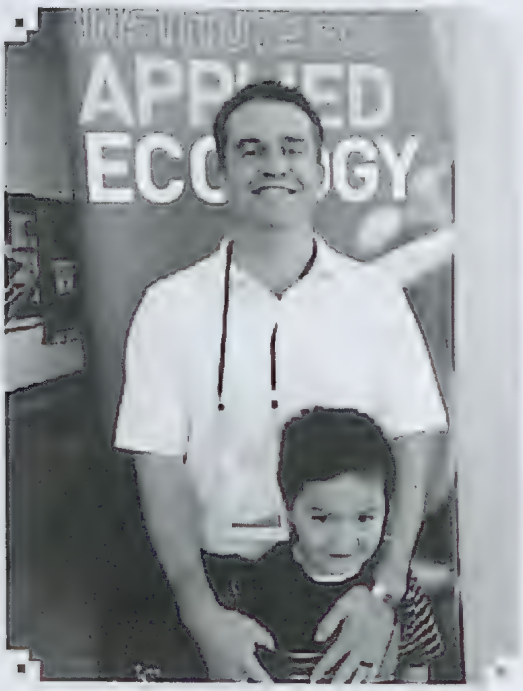
Lungfish Chapter

The 52nd ASL congress hosted the inaugural events for the Lungfish Chapter, which promotes the exchange of ideas and transfer of knowledge, between older and younger members of the society. On the first day this got off to a great start when Lungfish (longstanding ASL members - 25 years+) were invited to the student mixer. We had several reports from both Lungfish and students what a valuable experience it was, with both sides learning from the other. Then at lunchtime on Thursday (the last day of the congress) we all benefited from the science, anecdotes and life lessons of a fascinating career, when Professor Angela Arthington gave the inaugural Lungfish address. Angela gave some valuable insights into her research on the lakes of Fraser Island, the importance of being ready to go to court and stand up for your commitments and the success she had in conserving these systems; the importance of networks in her excellent research on freshwater fishes and finally her comprehensive research into environmental flows encapsulating early work and looking into the future culminating in her recent book 'Environmental Flows: Saving Rivers in the Third Millennium'. We look forward to the next Lungfish events at Darwin next year! If you have any questions or ideas for events or interactions with the Lungfish Chapter please contact Jenny Davis (jenny.davis@monash.edu) or Jane Chambers (J.Chambers@murdoch.edu.au).

Photo (from left): Jane Chambers, Angela Arthington and Jenny Davis at the inaugural Lungfish Lecture.

Black Box Special Session

This special session was held on the first day of the Congress, chaired by Jane Roberts and Samantha Capon. The aim of the session was to synthesise the collective knowledge of participants on the status of black box and black box woodlands throughout their distribution and to discuss possible collaborative mechanisms for addressing the topic further in the future. Presentations were given by Jane Roberts (on black box regeneration), Amy George (on population dynamics) and Heather McGinness (on woodland structure and function). Workshop participants identified a very small number of actively regenerating black box sites and there was general consensus that this species, and the ecosystems it forms, can be considered particularly vulnerable to changing climate, land-use and water regimes. The group agreed to seek support to run a dedicated workshop on the topic in the near future. For further information, please contact Samantha.Capon@gmail.com.



ASL Congress 2013 was also joined by our youngest member yet - 7 year old Leo Chatonsky, a budding limnologist who attended on the first day with his father, Stephane (pictured).

Conference watch...

3rd Symposium on Urbanization and Stream Ecology

15-17 May, Portland, Oregon, USA

2 March - Deadline for Abstract Submission

http://urbanstreams.wordpress.com/suse3-details-2/

JASM 2014, 18-23 May 2014, Portland, Oregon, USA

7 February - Deadline for Abstract Submission

7 March - Earlybird registration closes

http://sgmeet.com/jasm2014/

World's Large Rivers Conference, 21-25 July 2014, Manaus, Amazonas, Brazil

21 April - Earlybird registration closes

http://worldslargerivers.boku.ac.at/wlr/

7th Australian Stream Management Conference

27-30 July 2014, Townsville

28 April - Earlybird registration closes

http://7asm.org.au/

8th Shallow Lakes Conference, 12-17 October 2014, Antalya, Turkey

1 April - Deadline for Abstract Submission

http://www.shallowlakes2014.org/

Contributed article

Protecting Australia's Mighty River Systems – Or Not: The fate of the River Murray – Darling to Sea threatened ecological community

Dr GM Newton (Independent Ecologist)

A monumental moment lost...

After nearly five years of comprehensive assessment, Australia's first riverine ecosystem gained protection under our national environment law. The River Murray and associated wetlands, floodplains and groundwater systems, from the junction with the Darling River to the sea (or River Murray – Darling to Sea for short) threatened ecological community was listed as 'Critically Endangered' by the Commonwealth Environment Minister in August 2013, as per the Environment Protection and Biodiversity Conservation Act (EPBC Act) and its associated Regulations (see indicative map below). The listing recognised that this broader region incorporated a functioning ecosystem, within which hydrological connectivity is the critical factor for continued health. The listing decision was based on a pioneering scientific assessment that was world leading in its methodology and analytical content, and based on a landscape-scale, whole-of-system approach. The listing itself augured a new chapter in the conservation of aquatic ecosystems in this country,

Unfortunately this protection was destined to be short lived. Less than four short months later, a new Government and a new Environment Minister disallowed the listing in Parliament (supported by a vote in the House of Representatives). This also represented a first, as no other listed threatened ecological community has been disallowed against the decision of a Commonwealth Environment Minister and the rigorous and reasoned evidence of the independent Threatened Species Scientific Committee (the Committee) that prepares the listing advice (called the Conservation Advice). It is important to note that the disallowance required no justification or contrasting analysis. It was merely precipitated by the dissent of a vocal minority group that successfully lobbied Government and utilised the media. The line pushed to the media was that the listing was a last minute, hasty decision by an outgoing Government. Nothing could have been further from the truth.

The decision to list was based on science, with the advice and evidence developed by the independent Committee. This advice took close to five years to prepare and was done so according to strict guidelines, timing and regulations under the EPBC Act, and all statutory deadlines were met. The Conservation Advice involved analysis of over 400 peer reviewed references, books and government reports (of which some 350 are cited in the document).

River Murray Darling to Sea ecological community - river red gums at Finnis Creek (source: Matt White)

As this was the first time that the Committee had assessed such a large, complex riverine-floodplain system, they were keen to have experts from all relevant disciplines and government jurisdictions involved in the assessment process from the beginning. Consequently some 100 scientific experts were consulted, most of whom also attended at least one of two technical workshops held to guide and inform the process. The Conservation Advice was also made available for public comment as per the requirements of the EPBC Act, which aimed to seek feedback on its threatened status (i.e. rather than any social or economic related issues – these aspects can be taken into account after listing when development applications are being considered). The regulatory impacts for individual property owners and small business were likely to be negligible, but listing meant that big projects that may have a significant impact on the system would need to be referred for environment assessment to help ensure the long term sustainability of the system.

Why it's threatened

In the introduction of the landmark book on the River Murray, published in 1990, editors Mckay and Eastburn stated " ... the same processes which have destroyed many other rivers around the world are now in train on the Murray. Only concerted action by all levels of Government involved in management of the MDB will ensure the future of Australia's Greatest River." In the foreword of the same book the then President of the Murray-Darling Basin Commission states: "The picture that emerges from this volume is of a river in decline but not yet beyond saving."

However, that was before the arrival of the 13 year Millennium Drought in 1997, which proved a tipping point for this iconic aquatic ecosystem, leading to problems of extreme low water levels, acid sulphate soils and hypersalinity. But perhaps more importantly, this Drought highlighted the acute vulnerability of a system that had already been in decline for many decades. This trend of decline, since mid last century, was further demonstrated by the Conservation Advice prepared by the Committee, with overt symptoms showing up mainly after the 1970s. These deleterious trends have resulted from a range of threats and cumulative impacts, the most important of which are due to river regulation (and at times over extraction), historical vegetation clearance, invasive species (particularly carp and weeds), increasing salinisation, and more recently the impacts of climate change.

As with most Australian riverine-floodplain systems, the River Murray – Darling to Sea ecosystem has evolved under a regime of highly variable flow. As a result, the native flora and fauna inhabiting the system were adapted to a more variable existence with respect to flow. However, since the 1930s the system has been highly regulated, with 5 barrages near the mouth, and a series of ten weirs and locks along its length. Regulation has increased the 'stability' of water levels and reduced flow variability in the system, particularly with respect to small and medium flows, both in channel and overbank. For example, the series of fairly static weir pools has favoured invasive species like common carp and weeds. This situation has also allowed opportunistic native species like the yabby to move from floodplain billabongs into the river channel, displacing the Murray crayfish. Another example is the dominance of the floodplain freshwater mussel in the weir pools at the expense of the river mussel, a different species.

Overall, the range of threats and their cumulative impacts over past decades have resulted in a significant loss of biodiversity and impaired ecological function of the River Murray – Darling to Sea ecosystem. Many keystone species (for example those that are key providers of food or habitat, or apex predators, or serve other critical food-web roles), have undergone widespread and ongoing declines or loss (extinction), often with catastrophic recruitment failure. Examples include floodplain trees such as red gum and black box, freshwater macrophytes such as Ruppia species (tassel grass), and fauna such as Murray cod, Murray crayfish and freshwater snails.

The Committee also demonstrated in their Conservation Advice that there has been a severe decline in the integrity or functioning of this riverine-floodplain ecosystem that relates to four main features: significant biodiversity loss (including genetic diversity) across a range of taxa; promotion of conditions that favour invasion by non-native species; altered hydrological regime leading to disruption of key ecological processes (including reproduction and recruitment); and importantly, loss of connectivity (i.e. between the river and floodplain, and between freshwater and estuary/marine habitats) leading to disruption of key ecological processes and ecosystem services such as productivity, nutrient recycling, water quality, breeding migrations, and recruitment.

The Committee also demonstrated that there was a continuing rate of detrimental change impacting on critically important species and ecological processes that related to the ongoing and increasing trend of salinisation of the floodplain soils. As a result, some 80% of river red gum are stressed, dying or dead in the South Australian component (the majority) of the ecosystem.

A fragile future

The Conservation Advice also provides guidance on priority conservation actions for research and management to work toward restoration and rehabilitation of the system where this is possible and/or practical. As for any aquatic ecosystem, the best approach for rehabilitation is to build up resilience to environmental disturbance. And the best way to build resilience is to lessen the cumulative threats. The Conservation Advice serves as a unique analysis and identifies the range of threats operating and how they impact ecologically. It provides knowledge and information for managers to use to work towards removing or decreasing threats and their impacts. However, the Conservation Advice is not about how much water is actually in the system or how it is used - that is the purview of the Water Act and its related Basin Plan, although the Conservation Advice highlights priority conservation actions that may serve as guidance for prioritising future environmental watering activities.

Lake Alexandrina near River Murray Mouth at height of Millennium Drought in 2009. (Photo: Gina Newton)

Despite the disallowance and the fact this this nationally important and vital aquatic ecosystem is no longer protected by our national environment law, the River Murray – Darling to Sea ecological community remains critically endangered. While many folk may believe the system to be in a healthy condition post the Millennium Drought due to the fact that it now has a lot of water in it, the scientific evidence suggests otherwise. A healthy and sustainable future for the mighty River Murray does not simply depend on adding water. Rather, the health and sustainability of the River Murray – Darling to Sea ecosystem is based on a complex web of ecological relationships between the plants and animals that live there, and between this biodiversity and their environment. These relationships are very much influenced by hydrological connectivity. Importantly, a sustainable future also depends on recognition that the ecosystem is in trouble, in addition to adequate monitoring of its condition, and concerted rehabilitation efforts, including ensuring adequate and appropriate long term water levels and flows.

Unfortunately, two major long-term monitoring programs, the Native Fish Strategy, and the Sustainable Rivers Audit have now been scrapped. Therefore, the disallowance, the lack of long-term monitoring, and the recent news that some water rights bought for the environment in recent years will be sold back to industry, together caste a grey shadow over this unique part of a vital national asset, the once mighty River Murray. These actions also call into question the future of conservation for Australia's unique aquatic ecosystems.

The Conservation Advice and reports from the two technical workshops are at: http://www.environment.gov.au/topics/biodiversity/threatened-species-ecological-communities/threatened-species-scientific .

Dr Newton is now an independent ecologist who previously worked with the Commonwealth Department of the Environment and the Committee to progress and prepare the Conservation Advice.

"In Timms gone by..."

an irregular series by Brian Timms and friends

#4. The Demon under the Bonnett

Back in the early eighties I had an ABRS grant to study tropical cladocerans. Among many aspects, this entailed going north for 6-7 weeks during the southern winter for four years in a row. I thought this was a pretty good arrangement and I was allowed to use my own Landrover. It was a Series III Long Wheel Base, which anyone who knows, meant it had a lousy engine which was best replaced with a Holden 186 engine. This I duly did. For the trip up eastern Queensland and to Cape York in 1982 I arranged to have as my assistant a bush mechanic cum bird watcher guy. Given the new motor and lots of waterbirds he thought he was in for an easy time. Poor disillusioned fellow.

Field trip planning...

Our designer aircleaner

I took my young family as far as Cairns, working various wetlands enroute. These included Lakes Buchanan and Galilee, the only saline systems in the tropical east (sorry I cannot help mentioning these given the salt in my blood from Monash days). Just before Cairns the engine almost fell out, the connecting bolts having sheared off. I got towed to a good garage, fixed up and was told buy spare bolts for the trip to the wilds of Cape York. At Cairns the family went home by train and Marty joined me for the arduous trip to the far north. The modus operandi at each wetland was for me to sample for cladocerans, while Marty could watch birds. He soon found out that I would be finished and wanting to go on just when he had found some rare species or about to get a good photograph. However he got his revenge each night as we played cards and I never won anything. So Marty survived my sampling and I survived his nightly demolition at cards. But this was only the beginning!

About 20 km before Coen there was an almighty bang under the bonnet. Half the bolts had sheared and the engine was on its side and the carburetor broke. We repaired the later with araldite and wedged the engine into its proper position with thick timber I cut for the purpose from the nearby bush. By the time we crawled into Coen the petrol had dissolved most of the araldite and the carburetor had a very leaky bowl. The very helpful garage proprietor said there might be a spare carby down in his dump, so there we went and in time found the correct one. Marty cleaned and installed it. With new bolts securing the engine we resumed our journey.

In those days the track to the Cape was horrific and a real challenge to 4WDrivers. While I had a fair bit experience 4WDriving, I didn't for if for the thrills, but to get to remote places to study animals. So the trip was harrowing, getting though metre deep creeks, up clayey slopes (it took us 7 attempts at one place), through bogs and across log bridges. These bridges consisted of four logs in two pairs so that the wheels fitted into the groove between the two adjacent logs. When the fit was not good (eg off centre, too wide apart) it was a truly hairy experience. We were finding plenty of cladocerans and all was going well. After the ferry across the Jardine, which must be the most expensive short journey in Australia, we rolled into Bamaga to refuel. This was a totally inefficient process but we eventually left satisfied. However before we reached Cape York the engine started spluttering and investigation revealed a carby full of water---we had purchased at least a few litres of water with our 150 litres of petrol. This meant cleaning out the bowl a few times a day till we got more fuel at Coen. Marty was earning his keep.

trying to leave a creek

Next we headed east across on an ill-defined track eastwards to Ussher Point where there were many coastal dune lakes. Besides these being likely places to catch cladocerans (the southern dune lakes had many endemics), I wanted to study tropical dune lakes. We spent two pleasant days on remote sandy beaches and paddling around in dune lakes. Among the samples was a huge clam shrimp. After all these years, I have just described it as new genus and species, Australimnadia gigantea. It also occurs sporadically across the north and east of Australia.

On our way back, we went down some of the Gulf Rivers to lovely waterholes. On these tracks bulldust was a real problem getting into absolutely everything, including clothes in our bags and into our loose food in packets. As a result, to this very day, I carry all loose food in plastic containers with screwtop lids. At one station we picked up a jackeroo to take him downriver, but we were glad when he left as he smoked continually and we were worried about our petrol drums which occasionally leaked fumes. He just took no notice of our protestations.

Back on the main track we hit a bigger bump than usual which dislodged the aircleaner off the top of the carburetor and we run over it and squashed it beyond repair. So we got an empty baked bean tin, cut strips out of it, covered it with a sock, tied it down with wire and hey presto we had a designer aircleaner. It worked well till Bloomfield where we were able to buy a genuine replacement from a wrecker's yard for a whole $5.

Further down the track the engine spluttered and stopped. We both peered into the engine bay and tinkered with this and that, but to no avail. Marty was beat so I was really worried; all we could do was to wait for help to come probably in the form of some mad 4WDer who knew more mechanics than we did. However while sitting at the side of the track, I realized I had not changed the switch to the auxiliary fuel tank! One switch and we were away. I was a nervous wreck, not helped by Marty's banter.

Eventually the engine bolts gave way again and this time we needed some welding done. Marty could do that too and an aboriginal settlement obliged with equipment. As luck would have it this was possible because up the track we had pulled their manager out of a bog. Of course everybody helps everybody in remote places, so this was no big deal.

Despite the problems under the bonnet, it was a successful trip, though I think I aged prematurely. Certainly it led to a few papers, one on Lake Buchanan, another on tropical dune lakes and of course something on biogeography of tropical cladocerans.

Minutes from 2013 AGM

(p = proposed, s = seconded)

1. Adoption of agenda: p = B. Robson, s = R. Marchant

2. Apologies: none

3. Acceptance of minutes of last AGM: p = B. Robson, s = R. Lester

4. Matters arising: none

5. **President's report:**

Welcome to another fantastic ASL congress in our 52nd year. I would like to thank each member of the ASL executive committee for their support and contributions to the teleconferences during the year. I would also like to thank ASN Events, especially Jacqui and Simon, for all their help during the year and being so responsive to all our requests. I would also like to thank the organizing committee for this year's conference, led by Prof Ross Thompson.

During his time as President, Darren Ryder successfully managed to increase the ASL membership and I am pleased to report that our numbers remain around 400, which is pleasing in the present tight financial climate. To try to sustain and increase numbers as well as provide more to ASL members, the executive has been focussing on encouraging State-based activities. Tasmania and the ACT have continued to hold regular events and NSW held a successful workshop on the impacts of coal-seam gas on freshwaters. WA held its first local event for a long time and we continue to encourage the other states to hold some local events of their choosing, whether pub nights, workshops or other ideas. Please email me your ideas for local events. We are also focussing on enhancing student involvement as much as possible. Monday's student workshops were very well attended and continue to provide a bit of extra value for students attending the conference. This year we also have the inaugural Lungfish Lecture, an initiative of the Lungfish Chapter, a group of long-time ASL members aiming to give something back to the society especially its student members. Prof Angela Arthington is presenting this lecture tomorrow lunchtime and I urge everyone, but especially our student members to attend to hear her words of wisdom. We'd also like to see each State holding local events involving student members and as we now have more student reps on the committee, I am hoping we will see new activities happening next year.

ASL is experiencing increasing demand for funding a variety of activities. For example, the committee is revising the application process for the Bill Williams travel award. Richard Marchant will comment on this later in the meeting.

Because of this increased demand for funding, this year we also developed an equitable process for funding external activities, such as support for book production costs or limnology-related events. In the members section of the website there is now a section called policies. Clicking on this will bring you to a page where the criteria that need to be met for funding both conferences and external activities may be found. Both the website and the Facebook page continue to enhance communication among ASL members.

This year ASL took on the role of representing the aquatic cluster at STA. Ross Thompson has represented us and we tabled our concerns about the absence of real funding for freshwater research despite water being a national research priority area. Unfortunately, the response made by STA to our concerns was inadequate and we are now pursuing this further to determine whether we can in fact get more for our money from STA. As this develops I will keep members informed via the newsletter.

Every year many ASL members achieve remarkable things. Of particular note this year was the Naumann-Thienemann Medal awarded to Prof Sam Lake, by SIL, the International Society for Limnology. This is the highest international award made in limnological science and Sam is only the second Australian to be so honoured.

So on that note, I encourage you all to get involved with ASL, especially at the State level; to start bombarding me with requests for State-based activities, and I look forward to the coming year with a very exciting mid-year conference in Darwin. (p = J. Chambers, s = T. Doeg)

6. Secretary's report:

Seven teleconferences were held since the last AGM and these have been (or will be) published in the newsletter. The main matter to present is the change to clause 8c in the constitution. I foreshadowed this with a note in the last newsletter (Spring 2013) indicating what needed changing and why this was necessary.

Clause 8c deals with the filling of casual vacancies on the executive. Currently it states: "The Executive Committee may appoint any suitable financial member of the Society to fill casual vacancies on the Executive Committee." Consumer Affairs Victoria now requires the following additional information be inserted in clause 8c: "A committee member may resign from the Executive Committee by written notice addressed to the President or Secretary. A person ceases to be a committee member if he or she ceases to be a member of the ASL; fails to attend 3 consecutive committee meetings (other than special or urgent committee meetings) without leave of absence; is removed by special resolution, dies or becomes insolvent under administration. The Executive Committee may appoint any suitable financial member of the Society to fill casual vacancies on the Executive Committee."

The modified clause was put to the vote and passed unanimously. (p = R. Marchant, s = B. Robson)

7. **Treasurer's report:**

Overall the society continues to be in a healthy financial state with income and expenditure continuing to balance.

Last year's conference was significantly less expensive than the previous year in Brisbane, but there were fewer attendees and less sponsorship and the conference effectively broke even ($2711 in profit compared to $25,889 the previous year).

The society's investment accounts continue to provide income to help students attend conferences. Interest rates continued to be low over the past year, but we increased the amount of money provided to support students, using some of the other operating funding. We have also reviewed how students are selected for funding. The first year of state-based activity funding has been a success, with events in NSW, Tasmania and Western Australia, and hopefully additional events next year across all states.

The society has received an unqualified audit statement again this year. The auditor did not raise any issues regarding the processes or financial position of ASL.

At the end of the financial year, on June 30th, the society had 409 financial members, which was up slightly from the 394 of the previous year. These included 4 emeritus members, 23 life members, 299 ordinary members, 76 student members and 7 library members. Given that last year, we saw a substantial increase in membership (up 50%) it is excellent that we have maintained this increase, particularly in student members.

(p = R. Marchant, s = F. Sheldon)

8. **Auditor's report:** see attached.

9. **Newsletter editor's report:**

Sam Capon, the current editor, thanked all contributors and encouraged others to send material by the due dates which are regularly emailed to members by ASN. There was some discussion whether the newsletter could be delivered more continuously, like a blog. However, the editor and others felt that it appeared often enough. Many members especially like the 'Reports from the Trenches' section and this will continue provided relevant news is sent in. Most members receive the newsletter as a pdf file.

10. ASL medal award:

The ASL medal is awarded in memory of Hilary Jolly and recognises excellence across any of three criteria: research excellence, in particular key publications; education or communication excellence, that advances and disseminates limnological knowledge in a variety of forums; and management excellence, especially the conservation and management of freshwaters. This year's recipient is remarkable for having been nominated for his achievements against all three criteria. Personally, I am delighted to announce the recipient of the 2013 ASL medal to you, because many years ago I was his first PhD student. Since then, he has supervised more than 25 PhD students and published more than 60 journal articles and 5 books and book chapters. He has sustained his passion for rigorous, original freshwater science and communicated it to those of us lucky enough to have been his students. This year's ASL medallist is Dr Leon Barmuta.

The excellence of Leon's research, its remarkable breadth and depth are well recognised. Leon began his career with Honours at the University of Adelaide, and a PhD with Sam Lake at Monash. He then did postdoctoral research at both UC Santa Barbara and Murdoch University, after which, in 1991, he accepted the position of Lecturer in Zoology at the University of Tasmania. Since then, his research has been characterised by its strong basis in ecology, its rigorous experimental design and sophisticated statistical analysis. He has made major contributions to invertebrate biomonitoring in Australia and to concepts of river conservation at an international level. He has also made major contributions to our knowledge of habitat complexity, trophic interactions and to river ecology in general.

Leon has always been committed to high quality teaching and has received several awards, most recently the prestigious National Office for Learning and Teaching Citation for Outstanding Contributions to Student Learning. He has been recognised for his innovative teaching practices that encourage active participation by students in their learning across science, freshwater ecology and research methods. Leon is an effective, successful and admired teacher of undergraduates. He has also guided and mentored his research students towards publication in international journals and they are making an active contribution to freshwater science and management across Australia and internationally.

Leon has had an enormous impact on the conservation, management and restoration of freshwaters in Tasmania and across Australia. He has collaborated with and been funded by a range of industry partners to inform the management of short-range endemic species, climate change and forestry impacts on headwater streams. Leon has also been a long-time and active member of ASL and was President from 1992-1993.

I therefore invite Leon to accept this medal and to present the Hilary Jolly award address at our next congress in Darwin in 2014.

11. Early Career Researcher award:

It is my honour, on behalf of the selection committee, to announce that the winner of the ASL Early Career Research Award for 2013 is Dr Sarina Loo.

Sarina has a wide range of experience from research to teaching, consultancy to management. She completed her PhD in freshwater ecology in 2007 at Monash University. Her PhD research (supervised by Professors Sam Lake, Ralph Mac Nally and Dennis O'Dowd) focused on the use of ecological models to predict the potential distributions of freshwater invasive species. This research resulted in a number of extremely high-quality publications.

Sarina has been actively involved in a range of teaching and service activities. Following her selection as a Peter Cullen Trust Fellow in 2010, she was co-ordinator of the Peter Cullen Trust Fellow's Network, and is a Director on the Board of the Peter Cullen Trust. Sarina is regarded as an exceptional communicator and teacher of science, with active involvement as a demonstrator at Monash and as a lecturer at Swinburne Institute of Technology between 2006 and 2008. She has also contributed to the organisation of workshops and special sessions within ASL.

Sarina has a passion for improving communication between public policy makers and for assisting scientists bring about a positive change in catchment management. She has published in this area and has been strongly engaged at all levels of government and community.

As the Director of River and Wetland Health within DEPI, Sarina occupies a senior position in government involving extreme responsibility. Her work focuses on the development of river, estuary and wetland health policy and she oversees huge investments of public funds in waterway management. She thus has much more influence in the actual management of freshwater systems than many of we academics will ever have. It is truly commendable that she has taken her scientific expertise and used it in the rather unfriendly environment of management.

In conclusion, I wanted to read part of the nomination that we received for Sarina: Dr Sarina Loo represents the very best of the modern water manager. Experienced in research and with an excellent publication history, she is also utterly committed to applying science in a policy and management setting. Highly articulate and engaged with her local and national water resource management community, she represents an exceptional model for young water scientists.

12. Bill Williams travel award:

This awarded funded two students, Alex Bush and Karlie McDonald, to attend international conferences in 2013. Four other students applied between March and June but missed out because the interest from the fund had been spent. As a result the executive decided to modify the conditions of the award. Applications will now only be accepted between Dec 1 (of the current year) and Jan 31 (of the subsequent year) so that all applications can be considered together at the beginning of the year when students are making decisions about attending international meetings. The length of the written statement about a student's research has been lengthened to two A4 pages to enable more details to be given. Students are also encouraged to ask their supervisor to provide clear support and justification for their trip. The ASL hopes to be able to support two students each year from this travel fund. These modifications and further details can be found on the ASL web site.

13. Student travel awards:

Eleven students received $500 each to help with costs of attending the Canberra congress: Daniela Cortez, Clarissa Barbosa, Rebecca Wood (Herron), Toni Furlonge, Sylvia Hay, Amanda Valois, Peter O'Toole, Mel Klamt, Teresa Mackintosh, Scott Strachan, Caitlin Bartholomaeus.

14. Future congresses:

2014 – A. King outlined the programme for the joint ASL/Australian Society for Fish Biology congress to be held next year in Darwin (30 June -4 July). She also briefly described the types of field trips and social events being planned. Abstracts and registration will be opened in early February.

2015 – B. Robson reminded members that a joint congress with the NZ Freshwater Sciences Society will be held in New Zealand in this year. No further details are currently available.

2016 – no suggestions have yet been received.

15. Election of the executive: no elections were necessary as the executive remained unchanged.

16. Election of the auditor: R. Lester proposed (and B. Robson seconded) that Coster Galgut Pty Ltd be reappointed. This was passed.

17. Student prizes (presented at the congress dinner):

a) PhD prize– Rachel Blakey (UNSW); runners up – Peter O'Toole (Murdoch), Rebecca Wood (UTS Sydney) and Caitlin Bartholomaeus (Murdoch).

b) MFR (CSIRO) prize – Peter Rose (Griffith)

c) Honours (or Undergraduate) prize – Isobel Colson (Charles Sturt); runner up – Samantha Lostrom (UWA)

d) Poster prize – Nicholas Moran (Monash); runner up – Emma Razeng (Monash).

18. General business:

Report on NSW ASL Workshop on 'Impacts of Coal seam gas and coal mining on water', 8 October 2013 at University of Technology Sydney, from G. Dunkerley.

The workshop had 32 registrations. Everyone listened with interest to a broad range of speakers with hydrogeological, ecotoxicological and ecological expertise, and participated enthusiastically in the workshop sessions.

Outcomes of the workshop were:

• We will be issuing a communique on the outcomes of the workshop and would like this to go into the newsletter and on the ASL website

• We would like to put PDFs of some of the presentations on the ASL website

• We are proposing an overview article for submission to a suitable journal (led by Ben Kefford)

• We are proposing developing monitoring guidelines for industry, for which we will be seeking endorsement from ASL and publication on the ASL website (developed by a working group of seven, including me)

Total income was $3113.64, total expenditure was $2955.01, giving a small profit of $158.63. Unfortunately, we were unsuccessful in gaining any cash sponsorship; on the other hand, UTS provided the facilities for free and we required no top-up from ASL funds.

Several people helped out, in particular I thank Liza Miller, Peter Jones and Tim Riding.

Meeting closed at 2 pm.

2013 Financial Statement

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

REG. NO A0030014 ABN 54 600 483 720

INCOME & EXPENDITURE STATEMENT FOR THE YEAR ENDED 30 JUNE 2013

		2013		2012
	$	$		$
INCOME				
Bank Interest - B Williams Award Capital	2,520			2,933
- General	9,551			11,246
		12,071		14,179
Conference:				
- Registration & Fees	106,070			195,860
- Sponsorship	25,000			40,350
		131,070		236,210
Membership Subscriptions		22,095		25,195
Sundry Income				115
TOTAL INCOME		$165,236		$276,089
EXPENSES				
Audit & Accounting Fees		2,240		2,350
Awards incl B.F Williams Travel Award		1,072		2,000
Bank Charges		1,213		2,280
Bookkeeping Fees		1,182		900
Conference:				
- Student Travel Award	5,500			4,000
- Other Prizes	2,027			500
- Accommodation	11,973			27,044
- Catering	47,303			79,401
- Venue, Hire of Equipment, etc	16,836			47,072
- Management Fees - ASN Events	43,758			52,305
		128,359		210,321
Insurance		1,700		1,892
Miscellaneous Expenses		119		193
Newsletter, Website, Printing & Publications		20,291		10,195
Stationery, Telephone & Postage		1,927		1,998
Subscriptions & Meetings - FAST5		2,775		1,805
TOTAL EXPENSES		$163,937		$444,261
PROFIT FROM ORDINARY ACTIVITIES		$1,299		$31,828
RETAINED PROFITS AT START OF YEAR		$316,366		$284,538
RETAINED PROFITS AT END OF YEAR		$317,665		$316,366

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

[redacted]

STATEMENT OF ASSETS & LIABILITIES AS AT 30 JUNE 2013

	2013	2012
	$	$
CURRENT ASSETS		
Nat Aust Bank - Cheque A/c 03-508-9711	3,957	956
Nat Aust Bank - Cash Maximiser 59-420-6427	54,316	51,217
Nat Aust Bank - National Term Deposit	82,221	82,221
Nat Aust Bank - Travel Award Term Deposit	50,390	50,390
Nat Aust Bank - A/C 58641626400B1	94,695	112,154
Prepayments	1,304	75
Deposit - Events & Conference	10,000	100
TOTAL CURRENT ASSETS	$296,983	$297,113
TOTAL ASSETS	$296,983	$297,113
CURRENT LIABILITIES		
Receipts in Advance - Conference	16,987	17,864
Sundry Creditors	-	300
GST Payable	2,400	2,631
TOTAL CURRENT LIABILITES	$19,387	$20,815
NET ASSETS	$277,596	$276,297
MEMBERS' FUNDS		
Retained Profits	$317,665	$316,266

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

REG NO. A0036 ABN 54 [illegible] 162 225

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 30 JUNE 2013

	2013 $	2012 $
CASH FLOWS FROM OPERATIONS		
Receipts from members	22,095	25,264
Receipts from conference	129,597	191,749
Payments to suppliers & others	(174,503)	(220,223)
Interest received	11,552	13,080
Other income		115
Net Cash (used)/provided by Operating Activities	(11,259)	9,985
CASH FLOW FROM INVESTING ACTIVITIES	Nil	Nil
CASH FLOW FROM FINANCING ACTIVITIES	Nil	Nil
Net Increase in Cash Held	(11,259)	9,985
Cash at Beginning of Financial Year	296,938	286,953
Cash at End of Financial Year	285,679	296,938

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

Reg No. [illegible] ABN: [illegible]

Independent Audit Report for the year ended 30 June 2013 to the Members of Australian Society for Limnology

Scope

We have audited the financial report, being a special purpose financial report, of the Australian Society for Limnology for the year ended 30 June 2013 which comprises Statement by Members of the Committee, Income and Expenditure Statement, Statement of Assets & Liabilities & Statement of Cash Flows.

The committee is responsible for the financial report and has determined that the accounting policies used are appropriate to meet the requirements of the Associations Incorporation Reform Act 2012 and the needs of members. The committee's responsibilities also include establishing and maintaining internal control relevant to the preparation of and fair presentation of the financial report that is free of material misstatement, whether due to fraud or error, selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

We have conducted an independent audit of this financial report in order to express an opinion on it to the members of the Australian Society for Limnology Inc. No opinion is expressed as to whether or not the accounting policies used are appropriate to the needs of the members. We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluation the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the committee, as all as evaluation the overall presentation of the financial report.
The financial report has been prepared for the purpose of fulfilling the requirements of the Associations Incorporation Reform Act 2012. We disclaim any assumption of responsibility for any reliance on this report or on the financial report to which it relates to any person other than the members, or for any purpose other than that for which it was prepared.
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Audit Opinion

In our opinion the financial report presents fairly, in all material respects the financial position of the Australian Society For Limnology Inc as at 30 June 2013 and the performance for the year then ended.

Coster Galgut Pty Ltd
ABN [illegible]
Chartered Accountants

Lindsay Coster FCA
19/11/2013

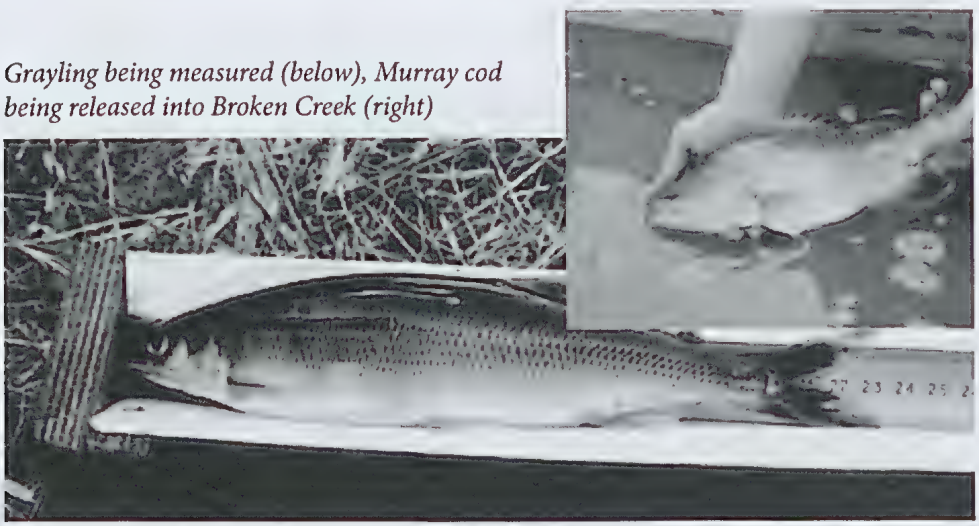
Reports from the trenches...

Arthur Rylah Institute for Environmental Research

Wayne Koster and Dave Dawson at the Arthur Rylah Institute are conducting an acoustic telemetry, larval drift sampling and electrofishing study investigating movement, spawning and recruitment of Golden perch in the Goulburn River in northern Victoria. The study has been running for over 10 years and has shown that despite large adult populations of Golden perch in the Goulburn River, eggs and larvae or juveniles of this species are rarely collected. However, following the implementation of 'spring fresh' environmental flows in November 2013, large numbers of Golden perch eggs were collected in the lower reaches of the river. Electrofishing surveys will be conducted next autumn to determine the extent of recruitment by this species following the environmental flows.

Wayne and Dave are also conducting an acoustic telemetry study investigating relationships between dissolved oxygen, environmental flows and behaviours of native fish (Murray Cod and Golden Perch) in the neighbouring Broken Creek. The results of the study so far show that most tagged fish occupy highly restricted reaches of stream, but a small proportion of fish undertake occasional longer distance movements coinciding with elevated flows. Wayne and Dave have also just completed a study investigating the spawning responses of the Australian Grayling to the provision of environmental flows in the Yarra and Bunyip rivers near Melbourne. The study has demonstrated a strong link between increased flow events in autumn and spawning of this nationally threatened

Grayling being measured (below), Murray cod being released into Broken Creek (right)



Water Planning Ecology Group

Department of Science, Information Technology, Innovation and the Arts (DSITIA), Ecosciences Precinct, 41 Boggo Road, Dutton Park, Queensland

We would first up like to welcome Bill Senior back into the fold. Bill has spent the last 6-12 months in another placement in DSITIA investigating likelihood scoring of different landuse threats to wetlands across Queensland (which he presented on at the ASL conference in early December). Bill comes back to the group to contribute his skills to the environmental flows projects starting with the Cape York catchments.

Not too much has happened in terms of fieldwork for the group during 2013; however, Jon Marshall, Glenn McGregor, Jo Blessing and Cam Schulz have completed several weeks of fieldwork investigating Great Artesian Basin springs and wetlands on Cape York. They made it home just in time before seasonal rain prevented access to many areas. The drill rig which was being used for other parts of the project wasn't so lucky! Glenn and Pete Negus have also recently travelled to Fraser Island to investigate biota in the patterned fens that can be found on the Western side of the Island and also in the Cooloola region on the adjacent mainland (see photo below). They joined several international researchers (UK, Sweden, and the Netherlands) as well as Patrick Moss and students from UQ looking at how the fens have developed. The patterned fens (which are largely situated in the RAMSAR listed area of the Fraser Island / Cooloola Coast) are interesting in that they are at low elevation and in the sub-tropics. Previously fens such as these have only been recorded in temperate areas and at high altitudes.

The group has been busy producing reports and contributing to publications over the last few months. Peer-reviewed papers and reports completed include 3 out of the 5 published papers in the recent proceedings of the Royal Society of Queensland – volume 118. The papers covered a wide range of topics: the impact of cane toads on desert spring ecosystems, the presence of stygofauna within fresh and highly saline aquifers in southern Queensland, and mapping regional groundwater chemistry zones in the Fitzroy Basin using statistical and conceptual methods.

The group has been busy producing reports and contributing to publications over the last few months. Peer-reviewed papers and reports completed include 3 out of the 5 published papers in the recent proceedings of the Royal Society of Queensland – volume 118. The papers covered a wide range of topics: the impact of cane toads on desert spring ecosystems, the presence of stygofauna within fresh and highly saline aquifers in southern Queensland, and mapping regional groundwater chemistry zones in the Fitzroy Basin using statistical and conceptual methods.

Jaye Lobegeiger has been leading a team (Glenn, Dean Holloway, Satish Choy and Jon) developing a state-wide strategic science plan to formalise and prioritise the needs for knowledge to support water planning across Queensland. This is aimed to guide what research and monitoring is undertaken for water resource planning over the coming years. Dean, Jon, Glenn and Andrew Biggs from DNRM in Toowoomba, have completed a report for MDBA consisting of a literature review and conceptual modelling of the watering requirements of floodplain vegetation in the Qld Murray-Darling Basin. The aim of this project was to form hypotheses concerning relative dependency on river flood water, groundwater and rainfall for the maintenance for key plant species relevant to the basin plan. They hope to now test these hypotheses in future projects.

Glenn, Jon, Jo Burton as well as James Groves from University of Melbourne have also recently completed a study into bank failures in the Brisbane and North Pine Rivers which will inform reviews of dam operation in these catchments.

Photos: Glenn sampling and not quite sampling Fraser Island fens

Until next time.
Cheers
Pete Negus

Glenn sampling and not quite sampling Fraser Island fens

We wish Jenny Davis all the best and good luck as she embarks on a new chapter of her career at University of Canberra in the New Year. We will all miss you Jenny!

The Monash Freshwater group has been busy with experiments, field work, laboratory work, writing and of course attending the ASL annual conference in Canberra. Esther Anderson has been doing oviposition choice experiment with Aedes mosquitoes in the laboratory. This involves blood feeding the female mosquitos (the lucky mozzies get to feed off her arm each week, yum yum!) then offering them different solutions in which to lay their eggs, then counting the eggs. She has also been struggling with the statistical program SPSS. She assures us that this program that is advertised as 'Analysis without anguish' is definitely false advertising and is finding a lot more anguish with trying to work with SPSS than blood feeding a cage of 50 mosquitoes!

Ashley Murphy has had a successful collecting trip to central Australia where he caught lots of "fush", which he has been busy extracting DNA from. He is now gearing up for the daunting next stage, analysing the population genetics results of 400 individuals. Emma Razeng has been spending her time in the lab preparing DNA samples of aquatic insects to be sent to colleagues in Florida. She attended the ASL conference in Canberra where her poster and speed talk were awarded a commendation. Well done Emma! Nicholas Moran has been trying to get 7 populations of wild Desert Goby to breed in Monash's Animal Behaviour Aquarium Facility. Their offspring will be used to continue his experiments on their feeding and exploratory behaviours. He also won the poster and speed talk prize at the ASL conference in Canberra. Congratulations Nick!

Teresa Mackintosh is progressing well in the lab and is hoping to have her work finished by early next year so she can focus on writing up her thesis. Mel Klamt has now completed all her field work and will be spending summer with invertebrates and plant samples in the lab. Fariba Pakdel has been busy setting up new experiments and preparing for her mesocosm field study at the Jock Marshall reserve.

Darren Giling has submitted his PhD thesis! Hooray for Darren! He is now busy preparing publications from his thesis as he awaits his examiners' comments. He was also awarded a Faculty of Science Postgraduate Publications Award to help him write up those publications. Go Darren!

Susie Ho has been teaching and working on manuscripts. She is looking forward to helping enthused student Tom Wilkins run some exciting mesocosm experiments next year. Post doc Sally Hladyz (CSIRO cluster) has finished up work on the final reports for the Cluster project and is now out and about in the field looking at the benefits of environmental flows on the Goulburn River and writing papers.

Sally Hladyz

Murray Darling
WETLANDS
WORKING GROUP LTD.

Annual Report:

The Murray Darling Wetlands Working Group Ltd. (MDWWG) 2012-13 Annual Report gives us the opportunity to report to you - the people who support us and make our work possible - on our recent achievements and can be viewed at http://www.murraydarlingwetlands.com.au/news-media/annual-reports/

Visitors:

We were delighted to host two visitors in the Sunraysia area in early December. Brian Richter (Director of Global Freshwater Strategies, The Nature Conservancy USA) paid us a return visit; having met Howard Jones and Deb Nias earlier in 2013. We also hosted a visit by David Papps (Commonwealth Environmental Water Holder, Canberra). Brian and David met landholders along the Murray and Darling Rivers, viewed private wetlands and attended the Fletchers Creek environmental watering

Fletchers Creek 2013/14 environmental watering:

Fletchers Creek is an ephemeral creek that, when flowing, empties into Fletchers Lake and is located about 6.5 km north-east from Wentworth, NSW. The MDWWG and the Barkindji Maraura Elders Environment Team (BMEET) have entered into a partnership project to deliver and monitor environmental water to Fletchers Creek, the first substantial flow into this creek for nearly four decades.

The MDWWG and BMEET gratefully appreciate the contribution of the NSW Office of Environment and Heritage; The Murray-Darling Freshwater Research Centre and the NSW Office of Water in this collaborative project.

A Fact Sheet and video capturing the event at Fletchers Creek are posted on our website http://www.murraydarlingwetlands.com.au/what-we-do/projects/current/fletchers.asp

Murray Wetland Carbon Storage Project – Investment Program:

Sarah Ning has completed wetland site assessments totalling 25 sites (15 landholders) in the Boree Creek, Urana, Jerilderie, Savernake and Corowa areas.

Members of the Project Team met to complete the evaluation process for all sites that applied for funding through the first Investment Round, with five criteria used to score the wetland sites and provide an overall weighting score.

The Murray Local Land Services has finalised the management actions and objectives for the project which will be used to develop the contractual documentation for landholders who are successful in their project being selected for the first Investment Round.

Request for Tender documentation has been developed for contractors to deliver the on-ground works program, to be distributed early February, and successful contractors appointed mid-February. Works are proposed to commence in March.

The monitoring component of the project was distributed to three providers in December 2013 seeking the services to carry out the 'Wetland Carbon Dynamics Program'. The contract has recently been awarded to The Murray-Darling Freshwater Research Centre who will undertake the development of a program to monitor system productivity, carbon storage before, during and after wetland rehabilitation, and implement the first years of sampling.

For further information, contact either of the Project Officers: Sarah Ning (MDWWG Ltd.) on 0427 376 157 sarahning@murraydarlingwetlands.com.au or Nicky Bruce (Murray Local Land Services) on 02 6051 2232, Nicky.Bruce@lls.nsw.gov.au

New project:

In mid-November, the former Murray CMA (now Western Local Land Services) advised, that due to time restraints and capacity, they wished to devolve funds obtained through the Regional Delivery component of the Caring for our Country initiative to progress the Carrs, Cappitts and Bunberoo Creeks system to the MDWWG Ltd. The Steering Committee reconvened in early December to determine options for Program Delivery for 2013/14. The preferred option is to undertake a desktop assessment outlining the legislation, licences and approvals required to compliment the Business Case (completed May 2013). This project will be delivered prior to 30 June 2014.

Third edition of field guide:

Wetlands Watch: A Field Guide for Monitoring Wetlands in the Southern Section of the Murray-Darling Basin was first published in 2002 and reprinted in 2003. The field guide was prepared to provide guidance for landholders to better manage wetlands.

Printing of the third edition of the field guide was made possible through generous sponsorship provided by the Mallee Catchment Management Authority, The Murray Darling Wetlands Working Group Ltd. wish to also acknowledge assistance provided by the Murray Catchment Management Authority (now Murray Local Land Services), The Murray-Darling Freshwater Research Centre and the Murrumbidgee Catchment Management Authority (now Riverina Local Land Services).

An order form is available at http://www.murraydarlingwetlands.com.au/publications/wetlandswatch3.asp

Cheers,

Rhonda Sinclair

Here at the Centre for Environmental Sustainability, UTS we were sad to say goodbye to Ben Kefford who has now taken up a new position at the University of Canberra. Lucky for us he is not far away and we will not be without his invaluable input and guidance! Thank you Ben for your contributions to research at UTS.

A successful collaborative grant application for an ARC-Linkage project has been awarded to Ben Kefford, Richard Lim and Ross Hyne (OEH), titled 'Salty gas: the ecological risk of saline effluents from coal seam gas and other hydrocarbon resources.' M. Azizur Rahman is back from Japan where he has been continuing his work on biotransformation of As by aquatic plants. Renee Dowse will be submitting her thesis on salt ecotoxicology and risk assessment in early 2014. She is then off to Rhodes University in Grahamstown, South Africa, where she has a Post-doctoral position in Freshwater Ecotoxicology. Carolina Lopez Vera has submitted a manuscript to the journal of Environmental Toxicology and Chemistry, the article is titled "Toxicity of Sodium bicarbonate to two freshwater crustaceans species and it's increase in Zinc toxicity". It is currently under review and she is hoping to get good news soon. This article was done in collaboration with Ben Kefford, Ross Hyne and other researchers from the OH&E Department. Rebecca Wood has now completed her fieldwork and labwork in North Queensland for the Reef Rescue project and developed a new biomonitoring index that can detect herbicide toxicity in rivers using benthic diatom community changes. Bec is now writing up her results and hopes to publish a few papers over the next six months. Noni Dowsett is now analysing results from her latest lab work looking at heavy metals in sediment and seagrass samples from Lake Macquarie. Daniela Cortez is busily processing macroinvertebrates from the Manning Valley (NSW) 2012/2013 irrigation, enjoying the challenge of identifying to Genus level. She is also excitedly preparing for a field trip back to the Manning River region for the 2013/2014 season, getting on waders and catching bugs. Richard Lim, Anne Colville and Aziz Rahman are working with ThuyChung Nguyen, a PHD student from Engineering, on a project using a range of toxicity tests to study road dust and runoff.

Simon Mitrovic's group is continuing work on a broad range of topics including environmental flows, dissolved organic carbon and algal blooms. James Hitchcock recently attended the Estuarine Coastal and Shelf Science conference in Shanghai where he presented work on the role of discharge and microbes in estuarine carbon dynamics. Stefanie Mueller is looking forward to present final results of the adaptive management study on cyanobacterial growth in Grahamstown Dam, which was part of her PhD, to Hunter Water early next year. In the meantime she is writing up her thesis and eagerly waiting to hear from Hydrobiologia about her recently submitted manuscript on long and short term nutrient limitation of phytoplankton growth. Ann-Marie Rohlfs is busy in the lab examining microbial responses to Snowy River environmental flows from Jindabyne Dam. Simon, Ann-Marie and Stefanie recently went to SIL in Budapest to present some results and sample the fine beer and food. A few finished honours students are writing up papers ; Grace Corrigan on phytoplankton nutrient limitation and Richard Carney on bacterioplankton responses to flow and carbon. Carla Thomas has also recently started Honours with Simon, Anne Colville and David van Reyk examining effects of algal toxins on aquatic plant communities. Maxine Mowe from the National University of Singapore (NUS) is visiting the labs at UTS to do some studies on temperature effects on the growth and toxin production of cyanobacteria until the end of December. Maxine is doing her PHD with supervisors Darren Yeo and Peter Todd from NUS, and Simon Mitrovic and Richard Lim from UTS.

UNIVERSITY OF CANBERRA

INSTITUTE FOR APPLIED ECOLOGY

We all enjoyed hosting the ASL conference in Canberra and hope that we dispelled some of the negative press Canberra sometimes gets!!

We are very pleased to welcome our new colleagues Asst Prof Ben Kefford who has moved from UTS, Professor Jenny Davis, Professor Ralph Mac Nally and Dr Jim Thomson from Monash University and Professor Jane Doolan formerly of Victorian DSE.

Ben Kefford is looking forward to starting an ARC linkage project on salinity pollution from coal seam gas extraction and coal mining.

Congratulations to Ross' PhD student Darren Giling who completed his PhD (carbon dynamics and revegetation in Victorian streams) and is busy writing up papers while he works out what comes next. Well done Darren!! Adrian Dusting continues his work on NZ mudsnail invasion and was recently featured in the Canberra Times. Clarissa Barbosa is working hard to finish her lab work before she makes the move to Canberra in March. Prue McGuffie has started her PhD work on Macquarie perch (with Ross and Mark Lintermans) and has tags in a number of fish. Teresa MacIntosh is being doubly productive – finishing up her lab work and expecting a baby mid-year. Congratulations Teresa!! Congratulations also to Samantha Imberger, previous PhD student of Ross, who is also expecting a baby this year. Nick Moran has been working his way through endless behavioural assays for his PhD work on desert goby predator interactions.

Ross Thompson and Laura Caffrey have been busy doing the sampling for Ross' future fellowship work on spatial patterns of biodiversity in chain-of-pool streams in Victoria. Alison King, Ross and Ralph Mac Nally are also planning and plotting for work on their new Linkage grant on resilience in aquatic and riparian flora and fauna in the MDB. Jenny Davis has completed another field trip (with Jayne Brim Box, Glenis McBurnie and Paul Sunnucks) on her and Ross' Discovery project in central Australian waterholes. Ross and Ralph, with Jim Thomson and Shaun Cunningham, are in the final stages of their ARC Linkage project on carbon dynamics and vegetation restoration in inland Victoria.

Fiona Dyer, Ben Broadhurst, Ross Thompson, Leah Moore, Duanne White and a large team from NSW Office of Water, NSW OEH, NSW Fisheries, UNSW and CSU to develop monitoring and evaluation plan for the lower Lachlan River for the Commonwealth Environmental Water Office

Fiona Dyer is continuing to run a project monitoring dissolved oxygenand temperature in pools in the Upper Murrumbidgee to look at the effects of flow and weather conditions. Suffering from locals interfering with equipment a little but not as much as previous years (touch wood). Fiona was also re-elected chair of the Upper Murrumbidgee Catchment Coordinating Committee

Veronika Vysna has completed her PhD and is now just dotting I's and crossing T's to complete it. Congratulations Vika!!! She has been working on a Koala project while waiting for her examiners reports and is currently taking in the sights of NZ.

Evan Harrison, Fiona Dyer , Chris Levings and Danny Wright recently had a paper published in Environmental Management on the response of stream turbidity in the Lower Cotter River Catchment since the 2003 Canberra Bushfires. Evan and Fiona along with Paloma Lucena-Moya (formally at UC) and Sondoss El-Sawah, Barry Croke and Rachael Griffiths (from ANU) also recently had a paper published in Stochastic Environmental Research and Risk Assessment on ecologically relevant climate change impacts on flow regimes and water quality.

Anthea Florance and Dave Sangston have finished (supervised by Fiona Dyer and Evan Harrison) both submitted their honours thesis in late 2013 and are eagerly awaiting the results. Well done Anthea and Dave !!!!!

For his PhD project Alan Couch has been monitoring Murray cod larvae in the Murrumbidgee River during spawning season to determine spawning date.

Evan Harrison and Sue Nichols recently ran another successful AUSRIVAS accreditation workshop. We had 23 participants which is a record number for the workshop held here at UC!

With Leonie Pearson (UC) and Juliet Christian-Smith (UC Berkely) Fiona Dyer has been looking at the way in which climate science (both physical and social science) is being used within the MDBPlan, the Bay Delta Plan and water resource planning in areas under the European Water Framework Directive. If anyone has any suggestions of national programs that do a good job of using climate science in their planning frameworks, we'd like to hear about them (e-mail: Fiona.Dyer@canberra.edu.au).

Evan Harrison

ASL experts

Prof A. Arthington: in stream flows, ecology of exotic fishes, conservation of rare fishes. Australian Rivers Institute, Griffith University, Nathan QLD 4111. Phone (07) 3875 7403, Fax (07) 3875 7615, email: a.arthington@mailbox.gu.edu.au

A/Prof P. Boon: bacteriological issues, wetlands. Environmental Management, Victoria University of Tech., PO Box 14428 MMC, VIC 3000. Phone (03) 9365 2214, Fax (03) 9365 2465, email: paul.boon@vu.edu.au

Dr K.Bowmer: pesticides - fate and ecological impact, aquatic plant management. Charles Sturt University, PO Box 588, Wagga Wagga, NSW 2678. Phone (02) 6933 2221, Fax (02) 6933 2060, email: kbowmer@csu.edu.au

Dr M. Brock: temporary wetlands, aquatic plants. 47 Brightwater Rd, Blackmans Bay, TAS 7052. Phone (03) 6227 1812, mobile 0429721416, email: brock.margaret@gmail.com

Prof. S. Bunn: stream ecology, ecology of riparian zones, biomonitoring. Australian Rivers Institute, Griffith University, Nathan, QLD 4111. Phone (07) 3735 7407, Fax (07) 3735 7615, email: s.bunn@griffith.edu.au

Dr M.Casanova: charophytes, temporary wetlands. 273 Casanova Rd Westmere, VIC 3351. Phone (03) 5350 2111, email: amcnova@netconnect.com.au

Prof J.Davis: wetland and stream ecology, ecology of central Australian waterbodies. Department of Biological Sciences, PO Box 18, Monash University, Clayton VIC 3800. Phone (03) 9905 1063, email: Jennifer.Davis@sci.monash.edu.au

Prof. P. De Deckker: salt lakes: biology, chemistry and history; palaeolimnology towards understanding past environmental change. Dept. of Earth & Marine Sciences, The Australian National University, Canberra ACT 0200. Phone (02) 6125 2070, Fax (02) 6125 5544, email: patrick.dedeckker@anu.edu.au

Dr. M. Douglas: tropical freshwater ecology, intermittent streams, tropical floodplains. School of Biological and Environmental Sciences, Northern Territory University, Darwin, NT 0909. Phone (08) 8946 7261, Fax (08) 8946 6847, email: michael.douglas@ntu.edu.au

Dr S.Eberhard: groundwater dependent ecosystems (subterranean fauna), caves and karst. Subterranean Ecology, Scientific Environmental Services, Greenwood, WA. Phone (08) 9203 9551

Dr M. Finlayson: wetland ecology and management; mining and agriculture impacts; inventory and assessment, Ramsar convention. Institute of Land, Water and Society, Charles Sturt University, Albury NSW. Phone (02) 6051 9779, email: mfinlayson@csu.edu.au

Dr A. García: taxonomy, ecology, biology and biogeography of extant and fossil charophytes. School of Earth and Environmental Sciences, University of Wollongong, NSW 2522. Phone (02) 4221 5966, Fax (02) 4221 5703, email: adriana@uow.edu.au

A/Prof M.Grace: nutrient cycling and biogeochemical processes. Chemistry Department, Monash University,Clayton, VIC 3800. Phone (03) 9905 4078, Fax (03) 9905 4196, email: michael.grace@sci.monash.edu

Dr T. Grant: platypus biology. Biological Science, University of NSW, PO Box 502, Cronulla, NSW 2230. Phone (02) 9527 2862, Fax (02) 9527 2862, email: t.grant@unsw.edu.au

Associate Professor M. Greenway: Constructed wetlands, Melaleuca wetlands, biogeochemical processes. School of Environmental Engineering, Faculty of Environmental Engineering, Griffith University, Nathan QLD 4111. Phone (07) 3875 7486, Fax (07) 3875 7404, email: m.greenway@mailbox.gu.edu.au

K. Hortle: Fisheries and environment, impact of mining, impact of development in SE Asia and PNG on rivers. 23A Waters Grove, Heathmont VIC 3135. Phone (03) 9720 5891, email: kent_hortle@bigpond.com

A/Prof P. Horwitz: conservation of freshwater invertebrates. Centre for Ecosystem Management, Edith Cowan University, Joondalup Drive, Joondalup, WA 6027. Phone (08) 9400 5558, Fax (08) 9400 5070, email: phorwitz@cowan.edu.au

Prof. P.S. Lake: stream ecology, conservation freshwater biota. Department of Biological Sciences, PO Box 18, Monash University, Clayton, VIC 3800. Phone (03) 9905 5653, Fax (03) 9905 5613, email: sam.lake@sci.monash.edu.au

Dr C. McCullough: mine water remediation and management, mining pit lakes, acid mine drainage, acid sulfate soils, ecotoxicology. Edith Cowan University, 270 Joondalup Drive, Joondalup WA 6027. Phone (08) 6304 5143, email: c.mccullough@ecu.edu.au

Dr V. Matveev: plankton food webs, biomanipulation. CSIRO Land and Water, 80 Meiers Road, Indooroopilly, QLD 4068. Phone (07) 3214 2755, Fax (07) 3214 2881, email: vlad.matveev@csiro.au

K. Muller: constructed wetlands, wetlands of the lower Murray. River Murray Catchment Water Management Board, 1 Colman Tce, Strathalbyn SA 5255. Phone (08) 8536 8125, Fax (08) 8536 8126, email: kerri_muller@triplei.com.au

Dr R. Pearson: tropical freshwater ecology. School of Tropical Biology, James Cook, University, Townsville, QLD 4811. Phone (07) 4781 5466, Fax (07) 4781 5511, email: richard.pearson@jcu.edu.au

Dr P. Pollard: microbial ecology. Australian Rivers Institute, Griffith University, Nathan QLD 4111 Phone (07) 3875 6597, Fax (07) 3875 7404, email: p.pollard@griffith.edu.au, web: www.microbialecology.org

Dr W. Ponder: taxonomy, biogeography and biology of freshwater mollusca. Invertebrate Zoology, Australian Museum, 6 College St, Sydney NSW 2001. Phone (02) 9320 6120, Fax (02) 9320 6050, email:winstonp@amsg.austmus.gov.au

Dr M. Serena: platypus ecology and conservation. Australian Platypus Conservancy, PO Box 84, Whittlesea VIC 3757. Phone (03) 9716 1626, Fax (03) 9716 1664, email: platypus@vicnet.net.au

Dr B. Sherman: reservoir management, cold water pollution and algal blooms. CSIRO Land & Water, Water Quality and Environmental Flows, GPO Box 1666 Canberra ACT 2601. Phone (02) 6246 5579, email: brad.sherman@csiro.au

Prof. R. Thompson: food web ecology, stream and lake ecology, climate change effects on aquatic habitats. Institute for Applied Ecology, University of Canberra. Phone (04) 3053 4094 Email: ross.thompson@canberra.edu.au

Dr B. Timms: lake geomorphology, coastal dune lakes, arid zone wetlands. Australian Wetlands and Rivers Centre, BEES, University of NSW, Sydney NSW 2052. Email: brian.timms@unsw.edu.au

Dr L. Townley: groundwater-surface water interactions. Townley & Associates Pty Ltd, PO Box 425, Claremont WA 6010. Phone (08) 9389 6377, Fax (08) 9389 6477, email: LTownley@Townley.com.au

ASL membership

I would encourage all ASL members to visit: www.asl.org.au for information on membership and contact ASN if necessary to bring your account up to date and make any changes necessary to your details. To attend the conference at member rates you must be a financial member valid until June 2014.

If your current membership expired June 2013 you will need to renew your membership in order to receive the member rates for the 2014 joint Congress. Non-member registration fees are well above the ASL membership fee and will not result in an ASL membership as per previous years..

If you think your membership has expired or you need confirmation of your status, please contact Jacqui Moir at ASN Events (jm@asnevents.net.au) or phone 03 59 832 400.

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Executive officers 2014

President
Assoc. Prof. Belinda Robson
School of Environmental Science
South Street campus, Murdoch University
90 South Street, Murdoch, Western Australia 6150
Ph: +61 8 9360 2417
Email: B.Robson@murdoch.edu.au

Vice-President
Assoc. Prof. Fran Sheldon
Australian Rivers Institute,
Nathan campus, Griffith University,
170 Kessels Road QLD 4111, Australia
Ph: +61 7 373 53914
Email: f.sheldon@griffith.edu.au

Immediate Past President
Assoc. Prof. Darren Ryder
Dept Ecosystem Management
University of New England, Armidale NSW 2351
Ph: + 61 2 6773 5226
Email: dryder2@une.edu.au

Secretary
Dr Richard Marchant
Museum Victoria, GPO Box 666E
Melbourne VIC 3001
Ph: +61 3 8341 7433
Email: rmarch@museum.vic.gov.au

Treasurer
Dr Rebecca Lester
School of Life and Environmental Sciences
Deakin University, Warrnambool, VIC 3280
Ph: +61 3 556 33330
Email: rebecca.lester@deakin.edu.au

State representatives

Australian Capital Territory
Evan Harrison
Institute of Applied Ecology
University of Canberra, Canberra, ACT
Email: evan.harrison@canberra.edu.au

New South Wales
Gillian Dunkerley
NSW Office of Environment and HeritageSydney, NSW
Email: Gillian.dunkerley@environment.nsw.gov.au

Northern Territory
Erica Garcia
Charles Darwin University, Darwin, NT
Email: Erica.garcia@cdu.edu.au

Queensland
Alisha Steward
Australian Rivers Institute, Griffith University, QLD
Email: alisha.steward@griffithuni.edu.au

South Australia
Michelle Bald
Department for Water, Adelaide, SA
Email: michelle.bald@sa.gov.au

Tasmania
Regina Magierowski
University of Tasmania, Hobart, Tasmania
Email: reginam@utas.edu.au

Victoria
Barbara Downes
University of Melbourne, Parkville, VIC 3010
Email: barbarad@unimelb.edu.au

Western Australia
Scott Strachan
Murdoch University, Perth, WA 6150
Email: s.strachan@murdoch.edu.au

Student representatives

Teresa Mackintosh
Australian Centre for Biodiversity and School of Biological Sciences
Monash University, Clayton, VIC 3800.
Email: Teresa.mackintosh@monash.edu

Daniela Cortez
University of Technology, Sydney, NSW
Email: Daniela.Cortez@uts.edu.au

Sally Hatton
Institute for Applied Ecology
University of Canberra, Canberra, ACT
Email: sally.hatton@canberra.edu.au

Caitlin Bartholomaeus
Murdoch University, WA
Email: c.bartholomaeus@murdoch.edu.au

ASL Australian Society for Limnology

The Australian Society for Limnology Inc. (ASL) is an Australian based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters. Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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